

Development of Stewardship Recommendations

New York State appreciates the opportunity to assist in the development of a forest management plan for Erie County Forestry. A plan for a well-managed forest starts with solid objectives, follows with descriptions of the resource and continues with recommendations and a schedule of management activities based on the objectives. The plan should help the County identify areas needing protection, areas suitable for recreation and educational study and areas which could be managed for income. Data can also be used to help the County maintain the infrastructure of roads, trails and fire lanes, critical for access and protection of public as well as private resources.

The County Forestry objectives must be clear and recorded to help guide all phases of management. Due to the location of the lands, they are subject to a large population of potential users, whether the users actually access them or only drive by them. Erie County residents obviously feel they have a right to access and utilize County lands in many ways. These uses can conflict with other uses and also with the management objectives of the County. The County must sort out which uses are consistent with the objectives, uses and capabilities of each unit of County land.

As with any management, one needs to know what is there in order to manage it properly. The field surveys just done by Earth Spirit have updated the 1965 USDA Soil Conservation Service inventory which recorded very general but still valuable data at that time. More specific data of sizes, species and density is now in place which provides a better base for decision making for all objectives. The Department of Environmental Conservation has used the Earth Spirit data and its own field checks to develop basic recommendations and priorities for forest management activities.



One of the conifer plantations nearing maturity.

The County Forestry parcels are identified as numbered Lots. Each County Lot had been broken down into 'Fields'. Some 'Fields' were indeed old pastures or agricultural fields in which were planted conifers. Other 'Fields' were originally hardwood stands. The new data collection by Earth Spirit has realigned these old 'Fields' into forest 'Stands' which have more meaning as management units. The recommendations are assigned to these new 'Stands'.



An uneven-aged hardwood stand containing high value Black Cherry and Sugar Maple.

Conifer Stands

The general recommendation given for the conifer plantations is to increase the rate of succession to indigenous species by considering a harvesting plan which would transform the conifer stand in small sections, releasing the understory hardwoods and leaving scattered mature hardwoods as seed sources to assist in regenerating these areas to hardwoods. While this decreases the non-native conifer population, it does increase species diversity, breaking up the large monotypic stands and creates more food and cover for wildlife at a low level. The sizes of these cuts should be small, only a few acres in size, with uncut areas between them and with uncut buffers left along sensitive areas needing protection from disturbance. The edges of these cuts will experience some unavoidable windthrow, but the visual impact should be minimal. The buffers would be along property boundaries, steep ravines, protected streams, protected wetlands, special educational/recreational areas and important wildlife corridors. Areas of white pines should be allowed to remain, because they are native and will typically outgrow hardwoods in the long term if grown on a suitable site. The patchwork of cut and uncut sections can be periodically revisited to transform additional sections as schedules permit.

Hardwood Stands

There are two major types of hardwood stands on County Forest land, even-aged and uneven-aged.

The even-aged stands are generally pole-sized trees (diameters 5-11") that have all grown together from an open field situation. Some of these stands are areas that were never planted with conifers. Others are areas that were planted with conifers, but either the planting failed or the conifers have rapidly declined and the ingrowth of hardwoods has come to dominate the site. The uneven-aged stands have been forested for many generations and have seen logging of some sort many times. These stands are a mix of many sizes and ages of trees that could be from one year old seedlings to tall trees hundreds of years old.

Even-aged stands in most cases should be managed for future crop trees and should have thinnings performed in them. This may be called timber stand improvement, and the material 'removed' may or may not be merchantable due to size or species. The future crop trees could have merit based on timber value, wildlife value, other values such as species diversity, aesthetics or any combination of these. Trees 'removed' during timber stand improvement may be either cut or killed. If they are pre-commercial, then they could be cut and left or killed with herbicides or by chainsaw girdling. If they are merchantable, they could be cut and removed for products such as firewood. Future crop trees in the pole stage will benefit from increased crown space and will increase their rate of radial growth and width of crown. This will shorten the time to reach sawtimber size or increase the size and development of the crown for seed production or survival. Some even-aged stands on low productivity sites would have a low priority for timber stand improvement. These stands may have adequate value by allowing them to grow naturally for wildlife, protection or educational objectives.

Another form of timber stand improvement needed in some stands is wild grapevine control. While wild grapes are a valuable food for many birds and animals, excessive growth of vines in the middle of a stand can destroy many good trees. Some stands with heavy growths of vines have recommendations to remove some vines by herbicide treatments about 2 years before any

cutting of trees is done. This will help prevent regrowth of vines after a thinning or regeneration cut. If vines are not controlled before a cut, they may then completely dominate an opening in the canopy created by tree removal, presenting severe competition for tree seedling establishment.

When even-aged stands mature and become sawtimber-size (+12" diameter), thinning is generally not recommended. However some timber stand improvement can still be done to 'remove' unwanted trees which may have low value. The low value may be due to disease, poor form, storm damage, low food value or large cull percentage. A growth response of residuals is not to be expected in these cases. But rather these trees should not be left alive after a harvest cut to interfere with natural regeneration by occupying or re-seeding the site.

There are many timber buyers in the marketplace that will be interested in the high quality maple and cherry that may become available from the County Forest land. However, not all timber will be high quality, in fact many of the first cuts should remove the worst, high risk, over-mature trees. Still, the County should have no problem finding a consultant to handle the work and the consultant should have no problem getting bids from buyers. The consultant will have a list of reputable buyers he usually sends bid prospectus sheets to that should help weed out the unscrupulous loggers. Still, it is always a good idea to have personnel periodically inspect the

harvesting to keep abreast of trail conditions and any possible problems.

The County should consider harvesting timber with a sustained yield schedule. This means that trees should be harvested on a particular schedule aimed at producing moderate income over a long period, as trees become financially mature. Such a schedule may involve a small timber sale every year or every other year in a different Lot or stand. Each Lot or stand may then experience another cut in 5-15 years. The DEC recommendations list high, medium or low priority activities, based on conditions at this time.

There are other ways of handling the harvesting of timber besides through a consultant and timber buyer. The County could consider doing the harvesting using County staff and equipment, skidding the topped trees to a landing and accepting bids from log buyers at that point. Doing this will gain a higher price for the logs than stumpage, because the woods work is already done and especially since the risk of culls or loss is being retained by the logger (the County). Veneer logs could also be identified at the landing and sold to the top bidder. Hardwood sawlogs could also be bucked and sawed at the County mill and the boards sold green. However attractive this method appears, the safety risk to County crews and the execution time, especially in winter may be prohibitive. The DEC strongly recommends that the previously suggested method be followed.